A phrasal analysis of Chinese comparatives∗

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1 Introduction

In this paper I investigate Chinese comparative constructions like (1). This kind of comparative construction doesn’t have a clausal comparative complement on the surface. Following conventional practices, I will call it a phrasal comparative construction.

(1) Zhangsan bi Lisi gaoxing
    Zhangsan than Lisi happy
    Zhangsan is happier than Lisi.

In the literature, there has been lots of debate about whether the phrasal comparative construction (2) should be analyzed as derived from its clausal counterpart (3) through ellipsis.

(2) John is happier than Bill.
(3) John is happier than Bill is.

Liu (1996) adopts the clausal analysis for (1). In this paper, I argue that the comparative site in (1) is a simple DP. Furthermore, the semantics of (1) can be derived by the direct analysis argued in Heim (1985) and Kennedy (1997).

The organization of the paper is the following: section two introduces the clausal analysis of phrasal comparatives and its application to Chinese in Liu (1996); In section three I lay out some problems for the clausal analysis of Chinese comparatives; section four introduces the semantic analysis for phrasal comparatives in Heim (1985) and Kennedy (1997); In section five, I adopt Heim and Kennedy’s analysis in Chinese, and I focus on one interesting consequence of this analysis: A to V movement. Section six is a summary.

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2 The clausal analysis of phrasal comparatives
2.1 General background
Following Cresswell (1976), gradable adjectives are analyzed as denoting relations between objects and degrees, and comparative constructions are quantificational expressions over degrees. Also, following Chomsky (1977), wh-movement is involved to bind a degree variable in a comparative construction. (4) has a structure like (5) and semantic interpretation like (6):

(4) John is happier than Bill is.
(5) John is happier than \[\text{CP Op, Bill is } d, \text{-much happy}\]
(6) \(\exists d [d > d_i]\text{[happy(John, d)]}\)

Following Bresnan (1973), it is usually assumed that phrasal comparatives are derived from their clausal counterparts through comparative ellipsis/comparative deletion. For example, (7) is derived from (4), so it has the same semantic interpretation as (8):

(7) John is happier than Bill.
(8) John is happier than \([\text{CP Bill is}]\)

Larson (1987) further suggests that comparative ellipsis is just a special name for a common ACD (antecedent contained deletion) process. Sentence (9) has the structure in (10), where the comparative site contains an empty I’.

(9) John grew as tall as / taller than his father.
(10) \([\text{IP} \text{[past[VP grow[AP as tall [CP as his father [I’ e]]]]]}]\)

If comparatives are quantifications over degrees, and quantificational elements undergo QR, the AP in (10) as tall as his father e will move to adjoin to IP at LF, as shown in (11):

(11) \([\text{IP} [\text{API as tall [CP as his father [I’ e]]}][\text{IP John [I’ past [VP grow [API e]]]]]}]\)

Now the empty I’ in the comparative site can be reconstructed from the I’ in the main clause, and the desired LF is derived in (12):

(12) \([\text{IP} [\text{API as tall [CP as his father [I’ Past [VP grow [API e]]}}][\text{IP John [I’ Past [VP grow [API e]]]]]}]\)
2.2 The clausal analysis of Chinese phrasal comparatives

Following Larson (1987), Liu (1996) analyzes the Chinese comparative construction (13) as derived from (14):

(13) Zhang san bi Lisi gaoxing
     Zhangsan than Lisi happy
     Zhangsan is happier than Lisi.

(14) \[ [\text{IP} \text{Zhangsan} \left[ \text{IP} \left[ \text{PP} \text{bi} \left[ \text{IP} \left[ \text{Lisi} \left[ \text{I'} e \right] \right] \right] \text{gaoxing} \right] \right] \]

Example (14) demonstrates three points. First, the \text{bi}-phrase is analyzed as an adjunct left adjoined to the predicate. Second, \text{Lisi}, which is only a DP on the surface, is analyzed as an elided CP, and the gap within the CP is an I’ structure, not a VP or an AP. Third, semantically, if we simply copy the I’ structure of the main predicate into the CP site, it is an instance of antecedent contained deletion and infinite regression will arise. To solve the problem, Liu adopts the traditional ACD solution of QR. He assumes that the \text{bi}-phrase is a quantified NP like \textit{every man} and undergoes QR to adjoin to IP. QR leaves a degree variable, and that variable has the same identity as \textit{how much happy}. The QR process is shown in (15).

(15) \[ [\text{IP} \text{Zhangsan} \left[ \text{I'} \left[ \text{AP} \text{how[AP happy]]]} \right] \] \[ [\text{IP} \text{Lisi} \left[ \text{I'} \left[ \text{AP} \text{how[i happy]} \right] \right] \] \[

I will adopt Liu’s first conclusion that the \text{bi}-phrase is a left adjunct of the predicate. The main argument comes from the position of the clausal adverbs in comparatives. For space reasons, I will not repeat his arguments, but refer readers to his original paper.

3 Problems with the clausal analysis

Although Liu’s analysis of the \text{bi}-phrase seems correct, the syntactic analysis of \text{Lisi} as an elided CP in (14) is problematic. In this section, I will lay out some problematic issues that a clausal analysis can’t handle.

3.1 Lack of long distance \textit{wh}-movement

Liu (1996) noticed that if an I’ gap is posited in (14), repeated as (16), the subject of the comparative clause, i.e. \text{Lisi}, wouldn’t get case.

(16) \[ [\text{IP} \text{Zhangsan} \left[ \text{IP} \left[ \text{PP} \text{bi} \left[ \text{IP} \text{Lisi} \left[ \text{I'} e \right] \right] \right] \text{gaoxing} \right] \]

Zhangsan than Lisi happy
Zhangsan is happier than Lisi.
To solve the problem, Liu stipulates that in (16) *bi* can assign ECM case to the subject of the following clause, just like an ECM verb can assign exceptional case, as in (17).

(17) John expected [IP Bill to be here]

Liu (1996) also claims that the ECM property of the preposition can explain the lack of long distance wh-movement in Chinese comparatives. As shown in (18), English clausal comparatives allow long distance wh-movement, assuming an movement analysis following Chomsky (1977).

(18) John is taller than [CP Op1 [CP Max thought [CP Bill is t]]]

Since in general Chinese allows long distance wh-movement, one would expect Chinese comparatives would behave the same as (18), if it is really clausal, but this is not the case, as shown in (19).

(19) *Zhangsan *bi Wangwu renwei Lisi zuotian gaoxing. Zhangsan than Wangsu think Lisi yesterday happy. Zhangsan is happier than Wangwu thought Lisi was yesterday.

The ECM ability of the preposition *bi* here is crucial for Liu to explain the contrast between (18) and (19). He argues that (19) is ungrammatical exactly because *Lisi* in the comparative clause cannot get case just like (16), but at the same time *bi* is too far away to assign ECM case to it, hence (16) can be saved by ECM marking, but (19) can’t. This account of (19) crucially hinges upon the stipulation that a preposition like *bi* has the ability to exceptionally mark case. However, even if this is true, in a structure like (16), *bi* can’t exceptionally case mark *Lisi* anyway, because there is a CP maximal projection in between the preposition and the IP.

If Liu’s account is wrong for (19), what is the alternative solution? I would propose that a more natural account for the contrast between (18) and (19) is that *Lisi* in (19) is only a DP, not the subject of an elided CP. As we can see in (20), in English, a phrasal comparative construction doesn’t allow long distance wh-movement either. So (19) patterns exactly like its English counterpart (20).

(20) *John is taller than [CP Bill thought [DPMax ]].
3.2 Lack of subdeletion
Comparatives like (21) below are called subdeletion in English. The biggest difference between subdeletion and other comparatives is that it is a full clause that is contained in the comparative site. The standard analysis of it is to posit a degree variable in the comparative site, which is bound by a wh-operator, as shown in (22):

(21) The table is longer than the door is wide.
(22) The table is longer [than [\text{[CP wh_i the door is d_i-much wide]]}].

Surprisingly, Chinese doesn’t allow subdeletions like (21). Example (23) below is bad in Chinese.

(23) *Zhuozi bi men kuan chang
table than door wide long
The table is longer than the door is wide.

Notice that if the clausal analysis of Chinese comparatives is right, a comparative sentence like (24) has an LF representation like (25):

(24) Zhuozi bi men chang
Table than door long
The table is longer than the door.

(25) Zhuozi [bi [\text{[CP wh_i men d_i-much chang_k]}] chang_k] chang_k
table [than [\text{[CP wh_i door d_i-much long_k]}] long_k]
The table is longer_k than [\text{[CP wh_i the door is d_i-much long_k]}].

Comparing (25) and (22), we see that they share the same mechanism of deriving the standard degree: there is a degree variable bound by a wh-operator. The only difference between (25) and (22) is that (25) contains an elided clause at the comparative site, so reconstruction has to be used to recover the predicate, whereas in (22), no ellipsis is involved, hence no reconstruction. As we have shown in (23), the counterpart of (22) in Chinese is bad. Now we have a puzzle: if (25) is a valid representation, why (22) is out in Chinese? One stipulation is that Chinese comparatives can host an elided CP, but not a full CP. However, it is surprising that a marked construction like ellipsis would be preferred over an unmarked one like a normal clause, and there is no natural explanation for this.

The alternative solution I will argue for is much simpler. Chinese comparatives don’t license a clause in the comparative site at all, no matter
whether it is an elided CP, or a full CP. (22) is ruled out for Chinese on these grounds, and therefore (25) isn’t the correct LF representation for (24) either. Instead, (25) has a simple structure like (26).

(26)  
\[
\text{Zhuozi [ bi [DP men]] chang} \\
\text{table [ than [DP door ]] long} \\
\text{The table is longer [than [DP the door]]}
\]

### 3.3 Dou in comparatives

A third problem for the clausal analysis concerns the interaction between the Chinese distributor *dou* and comparatives. There has been lots of discussion of *dou* in the literature. It is generally taken as a distributor that distributes a plurality argument to its left (see Lin 1998, Wu 1999 among others). If the subject of the clause is singular and not distributable, the presence of *dou* is not licensed, as shown in (27a).

(27)  
\[
\text{a. *Zhangsan dou zai jia.} \\
\text{Zhangsan dou at home.} \\
\text{Zhangsan is all at home.}
\]

\[
\text{b. Mei-ge-ren dou zai jia.} \\
\text{Every-CL-person dou at home} \\
\text{Everybody is (all) at home.}
\]

In (27b), the subject is a strong quantifier, and *dou* is allowed to distribute over the subject. Moreover, the presence of *dou* is obligatory in this situation, as shown by the contrast between (a) and (b) in (28).

(28)  
\[
\text{a. Mei-ge-ren dou xihuan youyong.} \\
\text{Every-CL-person dou like swim} \\
\text{Everyone likes swimming.}
\]

\[
\text{b. *Mei-ge-ren xihuan youyong.} \\
\text{Every-CL-person like swim} \\
\text{Everyone likes swimming.}
\]

With this small background on *dou* in mind, let’s now turn to comparatives.

(29)  
\[
\text{Mei-ge-nanhaiizi dou} \ bi \ mei-ge-nuhaizi gao \\
\text{Every-CL-boy dou than every-CL-girl tall} \\
\text{Every boy is taller than every girl.}
\]
In (29) there are two strong quantifiers, one is the subject of the matrix clause, the other is inside the 
bi-phrase. *Dou* can be licensed by the first quantifier, i.e. the subject of the matrix clause. The grammaticality of (29) is unexplained by the clausal analysis. If *every-girl* in (29) is the subject of an elided CP, as in (30), the sentence is wrongly predicted to be bad just like (28b), because there is no *dou* in this CP.

(30) Mei-ge-nanhai-zi dou [PP bi [CP mei-ge-nu-ai-zi e]] gao
    Every-CL-boy dou than every-CL-girl tall
    Every boy is taller than every girl.

The clausal analysis would also predict that if we add another *dou* in the elided CP, it could be licensed by the subject *every-girl*, and the sentence should fine. This is an incorrect prediction too, as shown in (31).

(31) * Mei-ge-nanhai-zi dou [PP bi [CP mei-ge-nu-ai-zi dou e]] gao
    Every-CL-boy dou than every-CL-girl dou tall
    Every boy is taller than every girl.

Examples (29) to (31) strongly suggest a phrasal status of *every girl* in the comparative site. However, there seem to be counter-examples. For instance, the presence of *dou* is fine in (32a).

    Zhangsan than every-CL-person dou tall
    Zhangsan is taller than everybody.

b. Zhangsan bi mei-ge-ren gao.
    Zhangsan than every-CL-person tall
    Zhangsan is taller than everybody.

On the surface, (32a) seems to support a clausal analysis of *everybody*, since if we assume everybody is the subject of an elided CP, the detailed structure of (32a) is like (33), and *dou* would be required in this CP.

(33) Zhangsan [PP bi [CP mei-ge-ren dou e]] gao
    Zhangsan than everybody dou tall

What is strange for this analysis is that (32b), which also has an LF like (33), isn’t bad, although there is no *dou* following *everybody*. This is unexpected since the structure in (33) predicts a contrast between the pair in (32), just like the contrast between the pair in (28).
Now we face a dilemma. If we analyze (32a) as (33), we can’t explain the grammaticality of (32b), on the other hand, if we don’t analyze everybody in (32a) as the subject of a clause, why is dou licensed in (32a)?

As has been noticed in the literature, the licenser of dou needs to be at the left of dou (the leftness constraint, Lin 1998), but it can be in various syntactic positions, for example, a topicalized object, as in (34), or an adjunct, as (35).

(34) Mei-ben-shu, Zhansan dou du-le.  
     Zhansan has read every book.

(35) Zhansan gei mei-ge-ren dou mai-le liwu.
     Zhansan for every-CL-person dou buy-perf. present
     Zhansan has bought present for everybody.

Example (35) is particularly interesting here, because it shows that a strong quantifier in an adjunct can license dou in the main predicate. Recall that the bi-phrase in Chinese comparatives is an adjunct, so (32a) actually patterns the same way as (35). The nature of this licensing from an adjunct isn’t very clear yet (see Lin 1998 for a discussion), but it is certainly not preferred to argue that in (35) everybody in the for-phrase is a CP. If in (35), everybody can stay as a DP inside a prepositional adjunct and license dou in the main predicate, in (32a), everybody could be a simple DP too, and this lends supports to a phrasal analysis of the comparative.

To summarize, the discussion in this section challenged the clausal analysis in Liu (1996). Assuming the comparative site of phrasal comparatives only contains a simple DP avoids many problems. The main focus of this section has concerned the syntactic advantages of a simple phrasal analysis. In next two sections, I will discuss the semantic advantages of this analysis too.

4 The direct analysis for phrasal comparatives

There have been many analyses that treat the comparative site in phrasal comparatives as a DP, not a clause (see Heim 1985 for a review). To derive the correct semantic interpretations, given the phrasal syntactic structure, Heim (1985) proposed a direct analysis. I will adopt her semantic analysis for Chinese phrasal comparatives. In this section I will introduce Heim’s analysis and a variation of her analysis in Kennedy (1997).
4.1 Heim (1985)
Heim (1985) argues for a direct analysis of phrasal comparatives. For example, the comparison in (36) is comparing two people along the dimension of “earliness of death”. A dimension of comparison is a function from individuals to degrees, so the dimension “earliness of death” is translated by Heim as a lambda-iota expression like (37). This function can take the two people in (36) as arguments respectively and give two degrees. The meaning of the comparative morpheme –er is specified as (38):

(36) Booker Little died earlier than Eric Dolphy.
(37) \(\lambda x \lambda y \ [x \text{ died } y\text{-early}]\)
(38) “-er\(\langle a, b \rangle f\)” is true iff \(f(a) > f(b)\)

Under this analysis, (36) has a semantic interpretation like (39):

(39) \(-\text{er}\langle\text{Little, Dolphy}\rangle\lambda x \lambda y \ [x \text{ died } y\text{-early}]\)

and (39) is true iff “the earliness of death for Little” > “the earliness of death for Dolphy”.

4.2 Kennedy (1997)
Kennedy develops the direct analysis in Heim (1985) to derive the semantics of phrasal comparatives compositionally. Assuming an extended adjectival projection DegP (see Corver 1997 for a discussion), (40) has a syntactic structure and a semantic interpretation like (41):

(40) The rug is longer than the desk.
(41) IP: \(\lambda x \langle \text{more(}\text{long}(x))\rangle (\text{long(}\text{the desk}))\)\(\langle\text{the rug}\rangle\)

\[
\begin{array}{c}
\text{DP} \\
\text{the rug}
\end{array}
\begin{array}{c}
\text{VP} \\
\text{V} \\
\text{DegP} : \lambda x \langle \text{more(}\text{long}(x))\rangle (\text{long(}\text{the desk}))
\end{array}
\begin{array}{c}
\text{is} \\
\text{Deg':}\lambda y \lambda x \langle \text{more(}\text{long}(x))\rangle (\text{long}(y))\) \langle\text{the desk}\rangle
\end{array}
\end{array}
\]

\[
\begin{array}{c}
\lambda G \lambda y \lambda x \langle \text{more}(G(x))(G(y))\rangle \langle\text{long}\rangle: \text{Deg'} \\
\text{Deg} \\
\text{AP} \\
\text{than the desk}
\end{array}
\begin{array}{c}
\text{PP} \\
\text{A} \\
\text{long}
\end{array}
\end{array}
\]
In (41), the degree morpheme combines with the function G provided by the adjective *long*, and G applies to its two arguments step by step. One argument is provided by the comparison phrase *the desk*, the other argument is provided by the subject *the rug*. This analysis leads to an interesting prediction. Just as a verb needs to be local to its arguments, we might predict that locality needs to hold between the adjective and its arguments too. Kennedy found this to be true. For example, in a phrasal comparative construction (42), the interpretation of the missing DegP can only be identical to the local DegP. This is in contrast with a real ellipsis construction (43), in which the ellipsis site can copy either the close predicate *read* or the non-local predicate *bought*.

(42) The table is wider than the rug, and the rug is longer than the desk.
    The rug is longer than the desk is [[DegP long]
    b. *The rug is longer than the desk is [[DegP wide]

(43) Marcus read every book I bought, and I read every book Charles did.
    … I read every book Charles read.
    … I read every book Charles bought.

In the following sections, I will show how this locality requirement interacts with A to V movement in Chinese comparatives.

5 A to V movement in Chinese phrasal comparatives
In section 2, I argued for a phrasal structure of Chinese comparative constructions, as shown in (44), and its structure is given in (45):

(44) Zhangsan bi [dpLisi] gaoxing
    Zhangsan than Lisi happy
    Zhangsan is happier than Lisi.

(45)

```
    IP
      Zhangsan
        VP
          PP
            than Lisi
          VP
            V
              DegP
                Deg
                  AP
tall
```
Following the direct analysis sketched in the last section, I assume the gradable adjective *tall* in (45) provides a function from individuals to degrees, and it takes *Zhangsan* and *Lisi* as its two arguments respectively. The semantic interpretation of (45) is roughly (46):

\[
\begin{align*}
\text{more}(\text{tall}(\text{Zhangsan}))(\text{tall}(\text{Lisi})) \\
\text{more}(\text{tall}(\text{Zhangsan}))(\text{tall}(\text{Lisi})) = 1 \text{ iff} \\
\text{tall}(\text{Zhangsan}) > \text{tall}(\text{Lisi})
\end{align*}
\]

However, there is a problem in applying the direct analysis to the structure in (45): the gradable adjective isn’t local to its two arguments in (45). If Kennedy is right to explain (42) in terms of the local relation between a gradable adjective and its arguments, we expect the same locality constraint has some effect on (45) too. I will argue in the rest of this section that to satisfy the locality constraint, an A to V movement happens in (45).

### 5.1 Optional A to V movement in non-comparatives

In non-comparatives, when the adjective predicate is modified by a measure phrase, the word order between the measure phrase and the adjective is flexible: the measure phrase stays either before the adjective (MA order), like (47a) below, or after the adjective (AM order), like (47b):

\[
\begin{align*}
\text{a. } & \text{Zhangsan liang mi gao} \quad \text{(MA order)} \\
& \text{Zhangsan two meters tall} \\
& \text{Zhangsan is two meters tall.} \\
\text{b. } & \text{Zhangsan gao liang mi.} \quad \text{(AM order)} \\
& \text{Zhangsan tall two meters.} \\
& \text{Zhangsan is two meters tall.}
\end{align*}
\]

The two word orders in the examples above give rise to the same meaning. However, a closer look reveals that the two orders don’t always behave the same. Notice that in contrast to their English translations, there are no copular verbs in the Chinese examples above, since Chinese doesn’t obligatorily require them before adjectival predicates. However, if we want to use verbs, only the order in (47a) is fine, whereas the order in (47b) becomes unacceptable. For instance, (48) shows the contrast when a copular verb *shi* (*is*) is added, and (49) shows the contrast when a verb *you* (*has*) is added.
(48)  a. Zhangsan shi liang mi gao.  (MA order)
    Zhangsan is two meters tall
b. *Zhangsan shi gao liang mi.  (AM order)
    Zhangsan is tall two meters
default order
(49)  a. Zhangsan you liang mi gao.  (MA order)
    Zhangsan has two meters tall
b. *Zhangsan you gao liang mi.  (AM order)
    Zhangsan has tall two meters
    Zhangsan is two meters tall.

Presumably *is or has* is heading a VP projection above the adjectival phrase. I also assume that measure phrases are in the specifier position of AP. In the (b) examples of (47) to (49), the adjective head is to the left of its specifier, which blocks the presence of a verb. Putting all these together, I propose that, as demonstrated in (50), the (b) examples above are derived through A to V movement, and verbs are blocked because the adjective occupies the verb head already, whereas the (a) examples don’t involve A to V movement. This means that there is an optional A to V movement in non-comparative constructions.

(50)  a. measure + A  b. A + measure

This approach captures the contrast between the two word orders, but one important question is what is the motivation for the movement. Under the Minimalist program (Chomsky 1995), movements are motivated by feature checking. However, since the movement in (50b) is optional, it doesn’t look like there exists a strong feature in the V position that has to be checked by movement. I don’t have any solution at the moment for this question, and I will leave it for future research.
5.2 Focus *shi* and copular *shi*

Some native speakers may feel that the contrast in (48) isn’t that strong, i.e. (b) is a good sentence too, examples repeated as (51):

(51)  
\[
\begin{align*}
    \text{a. Zhangsan shi liang mi gao.} & \quad \text{(MA order)} \\
    \quad & \quad \text{Zhangsan is two meters tall} \\
    \text{b. *Zhangsan shi gao liang mi.} & \quad \text{(AM order)} \\
    \quad & \quad \text{Zhangsan is tall two meters}
\end{align*}
\]

Since this piece of data is important to motivate the A to V movement, I will spend some time here to address this question. In this section I will argue that (51b) is ungrammatical when *shi* (*is*) is interpreted as a copular verb, which is consistent with my analysis in the last section, but it is grammatical when *shi* (*is*) is interpreted as a focus marker (see Huang 1982). The question is how to distinguish the two usages of *shi* (*is*). Stress pattern is a simple way to distinguish them. A focus marker is usually stressed, but a copular verb isn’t. In (51), to make (51b) sound good, native speakers tend to add more stress to *shi*. Besides this intuitive test, we can also use a systematic syntactic test.

In Chinese, *shi* can be used as a focus marker to indicate focus or contrast. When it is used as a focus marker, it can stay before the subject (52a), or after the subject but before the predicate (52b).

(52)  
\[
\begin{align*}
    \text{a. Shi Zhangsan chi-le pingguo, bu shi Lisi.} & \quad \text{(Is Zhangsan eat-PERF apple, not is Lisi)} \\
    \quad & \quad \text{It is Zhangsan that ate the apple, not Lisi.} \\
    \text{b. Zhangsan shi chi-le pingguo, bu shi zhong-le pingguo.} & \quad \text{(Zhangsan is eat-PERF apple, not is grow-PERF pingguo.)} \\
    \quad & \quad \text{Zhangsan (only) ate the apple, he didn’t grow it.}
\end{align*}
\]

Depending on the position of *shi* in the sentence, it is focusing on different things. For example, in (52a), it is the subject that is being focused, whereas in (52b), it is the predicate that is being focused. Not surprisingly, we shouldn’t have two focuses together in the same sentence, presumably because a sentence shouldn’t have two focuses at the same time (see Huang 1982). This what we find in (53):

(53)  
\[
\begin{align*}
    \text{*Shi Zhangsan shi chi-le pingguo} & \quad \text{(Is Zhangsan is eat-PERF apple)} \\
    \quad & \quad \text{It is Zhangsan that ate the apple. Or: Zhangsan did eat the apple.}
\end{align*}
\]
We can use (53) as a test to distinguish whether *shi* (51) is a copular verb or a focus marker. The logic is this: if *shi* is a copular verb, we should be able to add a focus *shi* to the same sentence, because a focus marker and a verb have no conflict; however, if there is already a focus *shi* in the sentence, we couldn’t add another focus *shi*, as (53) shows. As it turns out, a focus *shi* can be added to focus the subject in (51a), but not in (51b), as shown in (54a) and (54b) respectively.

(54) a. Shi Zhangsan shi liang mi gao, bu shi Lisi. (measure + A)
    It is Zhangsan that is two meters tall, not is Lisi.

   b. *Shi Zhangsan shi gao liang mi, bu shi Lisi. (A + measure)
       It is Zhangsan that is tall two meters, not is Lisi.

The contrast in (54) clearly suggests that the second *shi* in (54a) is a copular verb, but it is a focus marker in (54b). This explains away the possible challenge to my analysis about the A to V movement in the last section.

5.3 Obligatory A to V movement in comparatives

Surprisingly, in comparative constructions, the word order isn’t flexible any more. Specifically, the adjective has to stay to the left of the measure phrase.

(55) a. *Zhangsan bi Lisi liang mi gao. (measure + A)
    Zhangsan than Lisi two meters tall.

   b. Zhangsan bi Lisi gao liang mi. (A + measure)
       Zhangsan than Lisi tall two meters.

Since I have shown that verbs like *is/has* can only be added to the MA order, but this word order is banned in comparative constructions, we predict that those verbs can never show up in comparative constructions, and that prediction is correct.

(56) a. *Zhangsan you bi Lisi gao liang mi.
    Zhangsan has than Lisi tall two meters.

   b. *Zhangsan shi bi Lisi gao liang mi.
       Zhangsan is than Lisi tall two meters.

       Zhangsan is two meters taller than Lisi.
Recall that in (50), the variation in word order is analyzed as an optional A to V movement in non-comparative constructions. The constraint on word orders in comparative constructions, however, suggests that the A to V movement is obligatory. Based on (50b), sentence like (55b) has a derivation like (57):

(57)  
```
      IP
     /    \
   Zhangsan  VP
     |       |
    PP      VP
     |       |
  than Lisi V  DegP
       |          |
  talli  two meters  Deg'
       |          |
    Deg  AP
         |  \
       A  ti
```

But why is the A to V movement obligatory in (55)? Assuming the direct analysis of the comparatives sketched above, I argue that only after the movement, is the locality constraint satisfied and a correct semantic interpretation can be derived.

To summarize, the discussion in this section focused on the advantages of the semantic side of the phrasal analysis. Under the direct analysis, A to V movement in Chinese isn’t anything special, instead, it is just a different demonstration of the same locality constraint in English comparatives.

### 6 Summary

This paper focused on the syntax and semantics of phrasal comparative constructions in Chinese. I argued for a simple DP structure of the comparative site in phrasal comparatives. Without reconstructing the gradable adjective predicate, the correct semantic interpretation is derived for phrasal analysis through the direct analysis proposed in Heim (1985) and Kennedy (1997).
References


